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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,424	11/16/2001	Fyodor I. Maydanich	390086.95169	6845

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EXAMINER

SUNG, CHRISTINE

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 07/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/993,424

Applicant(s)

MAYDANICH ET AL.

Examiner

Christine Sung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-11, drawn to a cable and cable assembly, classified in class 174, subclass 117F.
 - II. Claims 12-16, drawn to a PET scanner, classified in class 250, subclass 363.03.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the cable as claimed can be used in a materially different process such as linking a computer to any peripheral, or any application where there is a transfer of data from one apparatus to another.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.
5. During a telephone conversation with Keith Baxter on June 10, 2003 a provisional election was made without traverse to prosecute the invention of the PET scanner, claims 12-16.

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Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-11 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

7. In paragraph 24, lines 9-10, the reference noted in the application has not been considered as it was not filed in an IDS.

Drawings

8. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: element 43. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 12, 14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamakawa (US Patent 6,285,028) in view of Sakurai (US Pre Grant Publication 2002/0189847).

Yamakawa discloses a nuclear imaging apparatus that comprises a series of detectors (figure 4, element 63n-34n) about a ring shaped gantry (Figure 27, element 47a, 49a); detector modules (65a-65n) collecting signals from the detectors and presenting a series of first terminals (See figure 10) that provide event signals; a ground separate from the signal return terminal (Figure 10, element 66); processor circuitry (Figure 10, element 69); a plurality of cables connecting the detector modules to the detector processor (Figure 10, element 68). Yamakawa does not disclose the specifics of the cable but Sakurai et al. discloses a shielded flat cable comprising: a series of mutually insulated and parallel electrical conductors joined edgewise to form a flexible ribbon for carrying detector signals (see figure (1a and 1b); a first shield covering the ribbon (Figure 1b, element 32); an insulating layer covering the outside of the first flexible shield (Figure 1b, element 31). Sakurai does not disclose a second shield to cover the insulating layer. Yamakawa in view of Sakurai discloses the claimed invention except for a second shield to cover the insulating layer. It would have been obvious to one having ordinary skill in the art at

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the time the invention was made to have used a second shielding layer, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v Bemis Co.*, 549 F.2d 833, 193 USPQ 8 (7th Circuit). Further it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the invention disclosed by Yamakawa with the cable as disclosed by Sakurai in order to protect the signal information being detected from unwanted electromagnetic radiation or other field induced errors.

Regarding claim 14, Yamakawa in view of Sakurai discloses the invention of claim 12 except for the specific use of metal foil for the shields. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the shields out of metal, since it has been held to be within the general skill of a working in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

Regarding claim 16, Yamakawa in view of Sakurai discloses the invention of claim 12, but does not specifically disclose a releasable connector for engaging the cable with the necessary elements, i.e. detector, processor. It is well known in the art to use such as releasable connector, as it is seen in many computer devices that employ a flat ribbon cable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the releasable connector since it was well known in the art.

12. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamakawa (US Patent 6,285,028) in view of Sakurai (US Pre Grant Publication 2002/0189847) further in view of Tatum (US Patent 4,281,211).

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The limitations set forth in claim 12, have been described in the abovementioned paragraphs. Yamakawa in view of Sakurai does not disclose the specific use of an outer insulating jacket covering the second shield. However, it is well known in the art to provide a insulating jacket to cover a ribbon cable in order to protect it from physical abrasions and to provide further shielding against unwanted electromagnetic noises, as disclosed by Tatum (see abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the insulating jacket as disclosed by Tatum, with the invention disclosed by Yamakawa in view of Sakurai in order to avoid physical abrasions or unwanted electromagnetic radiation from adversely affecting the quality of the data detected and transmitted from the detector to the processor.

13. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamakawa (US Patent 6,285,028) in view of Sakurai (US Pre Grant Publication 2002/0189847) further in view of Plummer (US Patent 4,461,076).

Yamakawa in view of Sakurai discloses the limitations set forth in claim 12 as described in the abovementioned paragraphs. However, Yamakawa in view of Sakurai does not disclose that the shields are pleated. Plummer discloses a method of shielding ribbon cables from electromagnetic radiation (see abstract), and further discloses that the shields are pleated longitudinally (see abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the pleated shields in order to snugly enclose the ribbon cable and to provide easy access to the ribbon cable storage cells. Securing the cables and access to the cables are essential to the proper function of the ribbon cable.

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Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. US Patent 6,235,993- this reference discloses a cable for use in a CT system using a plurality of shield and insulating layers, but contains the same assignee.


b. US Patent 5,393,928-This reference discloses a shielded cable assembly including multiple shielding elements.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Sung whose telephone number is 703-305-0382. The examiner can normally be reached on Monday- Friday 7-4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 703-308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-0956 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

CS
June 13, 2003


DAVID PORTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800